

REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1 and 3-7 are now present in this application. Claims 1 and 4 are independent.

Amendments have been made to the specification, claim 2 has been canceled and claims 3-7 have been added. Reconsideration of this application, as amended, is respectfully requested.

Priority Under 35 U.S.C. § 119

Applicant thanks the Examiner for acknowledging Applicant's claim for foreign priority under 35 U.S.C. § 119, and receipt of the certified priority document.

Objection to the Drawings

The Examiner has objected to the drawings because they do not include reference sign 30 (shadow mask), mentioned in the description.

In order to overcome this objection, Applicant is concurrently submitting Proposed Drawing Corrections for the Examiner's approval (added Fig. 10), which address each of the deficiencies pointed out by the Examiner.

Accordingly, reconsideration and withdrawal of this objection are respectfully requested.

Abstract of the Disclosure

Applicant has amended the Abstract of the Disclosure in order to place it in better form.

Specification Objection

The Examiner has objected to the specification because of several informalities. In order to overcome this objection, Applicant has amended the specification in order to correct the deficiencies pointed out by the Examiner.

Reconsideration and withdrawal of this objection are respectfully requested.

Substitute Specification

In accordance with MPEP §608.01(q), Applicant herewith submits a substitute specification in the above-identified application. Also included is a marked-up copy of the original specification which shows the portions of the original specification which are being added and deleted. Applicant respectfully submits that the substitute specification includes no new matter and that the

substitute specification includes the same changes as are indicated in the marked-up copy of the original specification showing additions and deletions.

Because the number of amendments which are being made to the original specification would render it difficult to consider the case, or to arrange the papers for printing or copying, Applicant has voluntarily submitted this substitute specification. Accordingly, Applicant respectfully requests that the substitute specification be entered into the application.

Rejection Under 35 U.S.C. § 102

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,644,192 to Ragland Jr. (Ragland). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

With regard to claim 2, while not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicant respectfully submits that claim 2 has been cancelled, thus rendering the rejection thereof under 35 U.S.C. § 102(b) moot.

With regard to independent claim 1, the Applicant's claimed invention provides a frame structure for supporting a tension type shadow mask, which includes a pair of main frames supporting the shadow mask, wherein the

supporting parts in the main frames have a single radius of curvature after the elastic force is removed.

On the other hand, Ragland discloses a color picture tube having a tensioned mask and a compliant support frame assembly, which includes two first members (42,44) and two second members (46,48) in which the two first members have only a first flange (52) extending toward the screen and a second flange (54) perpendicular to the first flange, in an L-shaped cross-section, respectively.

Ragland is silent as to a radius of curvature for the portion supporting the shadow mask in the first members (42,44), which appear to correspond to the main frame of the claimed invention. By contrast, the disclosed features of the curvature in Applicant's claimed invention are recited with technical precision. Particularly, Ragland fails to teach wherein a curvature of each one of said portions for supporting satisfies the equation $\Delta R / R = 0.95 \sim 1.05$ after the elastic force is removed, as recited in independent claim 1. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Added Claims

Claims 3-7 have been added for the Examiner's consideration. Applicant submits that claims 3 depends from independent claim 1, and is therefore

allowable based on its dependence from claim 1, which is believed to be allowable.

Independent claim 4 recites a combination of elements in a frame for supporting a tension-type shadow mask of a color CRT including wherein the portions for supporting in the first frames have a single radius of curvature after the elastic force is removed. Applicant respectfully submits that this combination of elements as set forth in independent claim 4 is not disclosed or made obvious by the prior art of record (see arguments with respect to independent claim 1).

Claims 5-7 depend, either directly or indirectly, from independent claim 4, and are therefore allowable based on their dependence from claim 4, which is believed to be allowable.

Consideration and allowance of claims 3-7 are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Percy L. Square, Registration No. 51,084, at (703) 205-8034, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

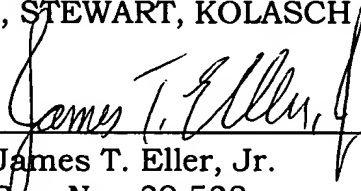
Attached hereto is a marked-up version of the changes made to the application by this Amendment.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants respectfully petition for a one (1) month extension of time for filing a response in connection with the present application and the required fee of \$110.00 is attached herewith.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,
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Attachment: Version with Markings to Show Changes Made
Abstract of the Disclosure
Substitute Specification (with marked-up copy)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

A marked-up version of the Substitute Specification is attached hereto, showing the changes made.

IN THE CLAIMS:

Claim 2 has been canceled without prejudice or disclaimer of the subject matter contained therein.

The claims have been amended as follows:

1. (Amended) A supporting frame structure for a tension-type shadow mask of a color CRT comprising:

[a pair of] ~~first and second~~ main frames, ~~each~~ having a [supporting part] ~~portion~~ for supporting a shadow mask[, respectively]; and

[a pair of] ~~first and second~~ sub frames combined with the main frames for applying elastic force to the shadow mask[;],

wherein [the] a curvature [structure] of each one of [the] ~~said portions~~ for supporting [parts in the main frames after the elastic force is removed] satisfies the equation $\Delta R / R = 0.95 \sim 1.05$ ~~after the elastic force is removed~~, where R is a radius of curvature obtained by connecting a center and both ends of each one of [the] ~~said portions~~ for supporting [parts in the main frame], and ΔR is a radius of curvature obtained by connecting three arbitrary positions of each one of [the] ~~said portions~~ for supporting [parts in the main frames].

Claims 3-7 have been added.

IN THE ABSTRACT:

The Abstract of the Disclosure has been amended as follows:

--ABSTRACT OF THE DISCLOSURE

A tension-type shadow mask supporting frame for a color CRT [is] comprises a pair of main frames having a supporting part for supporting a shadow mask, respectively; and a pair of sub frames combined with the main frames for applying elastic force to the shadow mask; wherein the curvature structure of each one of the supporting parts in the main frames after the elastic force is removed satisfies the equation $\Delta R / R = 0.95 \sim 1.05$, where R is a radius of curvature obtained by connecting a center of and both ends each one of the supporting parts in the main frames, and ΔR is a radius of curvature obtained by connecting three arbitrary positions each one of the supporting parts in the main frames. Also, in accordance with the present invention, there are some advantages in that the function of damper wire can be increased by increasing contact force at peripheral portions of a shadow mask, [thus] to thus improve howling phenomenon, and in case of manufacturing a main frame mechanically, costs for manufacturing [to] a single curvature form is less than costs for manufacturing [to the] a polynomial form.--

ABSTRACT OF THE DISCLOSURE

A tension-type shadow mask supporting frame for a color CRT [is] comprises a pair of main frames having a supporting part for supporting a shadow mask, respectively; and a pair of sub frames combined with the main frames for applying elastic force to the shadow mask; wherein the curvature structure of each one of the supporting parts in the main frames after the elastic force is removed satisfies the equation $\Delta R / R = 0.95 \sim 1.05$, where R is a radius of curvature obtained by connecting a center of and both ends each one of the supporting parts in the main frames, and ΔR is a radius of curvature obtained by connecting three arbitrary positions each one of the supporting parts in the main frames. Also, in accordance with the present invention, there are some advantages in that the function of damper wire can be increased by increasing contact force at peripheral portions of a shadow mask, to thus improve howling phenomenon, and in case of manufacturing a main frame mechanically, costs for manufacturing a single curvature form is less than costs for manufacturing a polynomial form.